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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,302	04/04/2005	Antonius Johannes Maria Nellissen	NL 020952	9661

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P.O. BOX 3001
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EXAMINER

HANLEY, BRITT D

ART UNIT	PAPER NUMBER
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2809

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/530,302

Applicant(s)

NELLISSSEN, ANTONIUS
JOHANNES MARIA

Examiner

Britt Hanley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/05/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/05/2005; 02/06/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

[01] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[02] Claims 1-3 & 5-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujimori et al. (EP 1 139 455 A2).

[03] Regarding claim 1, method for manufacturing a light emitting display comprising a plurality of light emitting elements (paragraph [0026], lines 12-16) on a substrate (1, Fig. 9a), wherein at least one delimiting (3, Fig. 9a) means is provided on or over said substrate (1, Fig. 9a) for at least partially bounding (shown in Fig. 9a) sites for deposition of a fluid light emitting substance (7, Fig. 12a) to form said light emitting elements characterized in that at least a part of at least one of said delimiting means is repellent (41, Fig. 9a & Fig. 12a) to said fluid light emitting substance (paragraph [0049], lines 36-38).

[04] Regarding claim 2, method according to claim 1, wherein said repellent part (41, Fig. 9a & Fig. 12a) comprises a hydrophobic material (paragraph [0049], lines 36-38; paragraph [0020], lines 10-15).

[05] Regarding claim 3, method according to claim 2, wherein said sites are bounded by a resist structure (3, Fig. 9a) and the repellent parts (41, Fig. 9a & Fig. 12a) are applied on

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said resist structure by local fluorination, application of a fluoropolymer or application of a water repellent primer (paragraph [0029], lines 10-15).

[06] Regarding claim 5, method according to claim 1, wherein different fluid light emitting substances adapted to generate different colours of light are deposited at different sites (paragraph [0026], lines 12-19).

[07] Regarding claim 6, method according to claim 1, wherein said fluid light emitting substance is deposited at said sites by a printing process (paragraph [0026], 18-19).

[08] Regarding claim 7, light emitting display comprising a plurality of light emitting elements (paragraph [0026], lines 12-19) on a substrate (1, Fig. 9a), said light emitting elements being defined by sites (Fig. 9a, Fig. 10a, Fig. 12 a all show sites where light emitting elements reside) on or over said substrate (1, Fig. 9a) comprising light emitting materials (71, Fig. 13a) characterized in that at least some of said sites are at least partially bounded by a hydrophobic flow barrier (41, Fig. 9a, Fig. 12a, & Fig. 13a).

[09] Regarding claim 8, light emitting display according to claim 7, wherein said hydrophobic flow barrier (41, Fig. 9a) is applied on or over a resist structure (3, Fig. 9a) and said display further comprises first and second electrodes (2 & 8, fig. 14a) for driving said light emitting elements.

[10] Regarding claim 9, light emitting display according to claim 7, wherein said display is a colour display (paragraph [0026], line 14).

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[11] Regarding claim 10, electric device comprising a light emitting display according to claim 7 (display of claim 7 is an electric device, see claim 7 above).

Claim Rejections - 35 USC § 103

[12] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[13] The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

[14] Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimori et al. (EP 1 139 455 A2) as applied to claim 1 above, and further in view of Shiraishi et al. (US 5,401,316).

[15] Regarding claim 4, Fujimori et al discloses a water repellent primer, but not that it is hexamethyldisilazane (HMDS).

[16] However, in the same field of semiconductor manufacturing, Shiraishi et al. teach a hydrophobic material hexamethyldisilazane (column 1, lines 12-30) that also acts as to improve adhesion strength. At the time the invention was made, it would have been obvious to a person having ordinary skill in the art to use hexamethyldisilazane as the hydrophobic substance as taught by Shiraishi et al. in the apparatus of Fujimori et al. because hexamethyldisilazane is hydrophobic and also acts to improve the adhesion strength (column 1, lines 22-30).

Conclusion

[17] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

[18] Mackenzie et al. disclose hydrophilic (58, Fig. 6) and hydrophobic surfaces (60, Fig. 6) in light-emitting device.

[19] Shibata et al. (US 6,184,610) disclose hexamethyldisilazane used as a hydrophobic substance applied using vapor phase absorption.

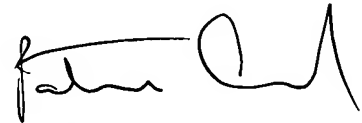
[20] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Britt Hanley whose telephone number is (571) 270-3042. The examiner can normally be reached on Monday - Thursday, 6:30a-5:00p ET.

[21] If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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[22] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BDH



PATRICK ASSOUD
SUPERVISORY PATENT EXAMINER